

WHAT IS CLAIMED IS:

1. A seal arrangement which seals off at least one radial interspace between a rotatable bearing ring and a rotationally fixed bearing ring, the seal arrangement comprising:

    a first carrier, the first carrier carrying a resilient seal and being fixed to said rotationally fixed bearing ring;

    a second carrier, the second carrier being fixed to the rotatable bearing ring and carrying an encoder, the encoder having an outwardly oriented circumferential surface which defines a truncated circular cone; and

    a dirt deflector, the dirt deflector and the first carrier being arranged such that they can rotate relative to each other such that the seal bears at least on the dirt deflector, the encoder being arranged outside the interspace and around the rotatable bearing ring.

2. The seal arrangement as claimed in claim 1, further comprising a covering element, the encoder being covered radially and axially by the covering element, the covering element being fixed to one of the bearing rings.

3. The seal arrangement as claimed in claim 2, in which the covering element at least partly covers the seal.

4. The seal arrangement as claimed in claim 2, in which the covering element is formed in one piece with the first carrier.

5. The seal arrangement as claimed in claim 2, in which the covering element is fixed to a radially outer surface section of the rotationally fixed bearing ring.

6. The seal arrangement as claimed in either one of claims 4 and 5, in which the covering element, starting from the rotationally fixed bearing ring, initially extends axially away from the rotationally fixed bearing ring, for being radially disposed between a

sensor and the encoder, and covers the encoder in the radial direction; the covering element then extends radially and at least partly covers the encoder and the interspace in the axial direction; and the covering element finally extends axially in the direction toward the interspace while carrying the seal.

7. The seal arrangement as claimed in either one of claims 4 and 5, in which the covering element, starting from the rotationally fixed bearing ring, initially extends axially away from the rotationally fixed bearing ring, for being radially disposed between a sensor and the encoder, and covers the encoder in the radial direction; the covering element then extends radially and at least partly covers the encoder and the interspace in the axial direction; the covering element then runs in the direction toward the interspace radially between the encoder and the rotatable bearing ring; and the covering element finally extends radially in the direction toward the rotatable bearing ring while carrying the seal.

8. The seal arrangement as claimed in claim 1, wherein the dirt deflector and the second carrier are formed in one piece.

9. The seal arrangement as claimed in claimed 2, in which the second carrier initially extends from the dirt deflector and, arranged radially between the seal and the rotatable bearing ring, extends axially in the direction toward the interspace; then extends radially between the interspace and the seal; runs radially away from the rotatable bearing ring; and finally runs axially in the direction toward the covering element while supporting the encoder.

10. The seal arrangement as claimed in claim 1, in which the seal bears on the dirt deflector in the axial direction with at least one sealing lip.

11. The seal arrangement as claimed in claim 1, in which the seal bears radially

on the dirt deflector with at least one sealing lip.

12. The seal arrangement as claimed in claim 1, in which the seal bears directly on the rotatable bearing ring with at least one sealing lip.

13. The seal arrangement as claimed in claim 1, in which the seal bears radially on the second carrier with at least one sealing lip.

14. The seal arrangement as claimed in claim 1, in which the seal and the dirt deflector enclose between them an annular hollow space filled with a lubricating grease.

15. The seal arrangement as claimed in claim 1, in which the dirt deflector is a ring with an angled cross section having two limbs disposed at right angles to each other, the encoder engaging radially around at least one of the limbs.

16. The seal arrangement as claimed in claim 1, in which the second carrier is a ring with two hollow cylindrical sections that face away from each other, the sections being connected to each other by a web which is disk-like and extends radially away from the rotatable bearing ring; wherein one of the sections accommodates the encoder radially and the other of the sections is seated on the rotatable bearing ring.

17. The seal arrangement as claimed in claim 1, in which the encoder is formed from a resilient material.

18. The seal arrangement as claimed in claim 1, further comprising a magnetization head for polarizing said encoder, in which the magnetization head has on its inner circumference an inner circumferential surface defining an inner cone, the inner circumferential surface corresponding with the circumferential surface of the truncated cone of the encoder; the rectilinear inner circumferential lines of the inner circumferential

surface describing the inner cone being inclined with respect to the axis of rotation of the magnetization head, and being longer than the circumferential lines oriented in the same direction as the inner circumferential lines and describing the circumferential surface of the encoder.

19. The seal arrangement as claimed in claim 18, in which the smallest inner cone diameter of the inner cone is smaller than the smallest external diameter of the truncated circular cone, and in which the inner circumferential surface of the magnetization head, which is seated on the encoder during polarization and bears on the circumferential surface, projects axially beyond the circumferential surface of the encoder on both sides.

20. The seal arrangement as claimed in claim 2, wherein said first and second carriers, said dirt deflector and said covering element are interconnected to form a cartridge.

21. A magnetization head for polarizing an encoder having an outwardly oriented circumferential surface which defines a truncated circular cone, in which the magnetization head has on its inner circumference an inner circumferential surface defining an inner cone, the inner circumferential surface corresponding with the circumferential surface of the truncated cone of the encoder; the rectilinear inner circumferential lines of the inner circumferential surface describing the inner cone being inclined with respect to the axis of rotation of the magnetization head, and being longer than the circumferential lines oriented in the same direction as the inner circumferential lines and describing the circumferential surface of the encoder.

22. The magnetization head as claimed in claim 21, in which the smallest inner cone diameter of the inner cone is smaller than the smallest external diameter of the truncated circular cone, and in which the inner circumferential surface of the magnetization head, which is seated on the encoder during polarization and bears on the circumferential

surface, projects axially beyond the circumferential surface of the encoder on both sides.

23. The magnetization head as claimed in claim 21, further comprising an encoder having an outwardly oriented circumferential surface which defines a truncated circular cone, said encoder being engaged with said magnetization head.